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REMARKS

Applicants have received and reviewed an Office Action dated October 5, 2006, which is in the form of a restriction and species election requirement. By way of response, Applicants present the remarks below including selection of a group of claims and election of species.

Claims 78–130 are currently pending. Claim 93 has been canceled without prejudice. Claims 78, 88–89, 90, 92, 94, 97, 109–110, 114, 117–119 and 127 have been amended. No new matter is presented. Applicants submit that the pending claims are supported by the specification.

For the reasons given below, Applicants submit that the pending claims are in condition for allowance and notification to that effect is earnestly solicited.

Restriction Requirement

Without acquiescing to the statements made in the Restriction Requirement, Applicants elect with traverse the claims of Group I (claims 78–93) for prosecution in the present application. Applicants traverse the Restriction Requirement, because it would not be unduly burdensome for the Examiner to search and examine all the claims. Withdrawal of the restriction requirement and examination on the merits are respectfully requested.

Applicants acknowledge that Groups I and III are related as process of making and products made, and that Groups II and III are related as product and process of use, and rejoinder may be possible.

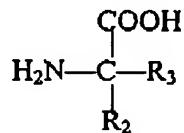
Species Election Requirement

Applicants acknowledge the designation of claims 78, 94, 95, 97, 99, 117, 118, 119 and 120 as generic. The Examiner requires restriction of the pending claims to a particular and specific species of building block, a particular and specific species of support, and a particular and specific type of coupling between the building block and the support. Applicants respectfully traverse this requirement. The inventive concept herein is not dependent on the use of a particular structure or species as the building block, or the support, nor is it dependent on the use of a particular type of coupling between the building block and support. Rather, the inventive concept is a method of making a heterogenous array, by applying building blocks to a support in

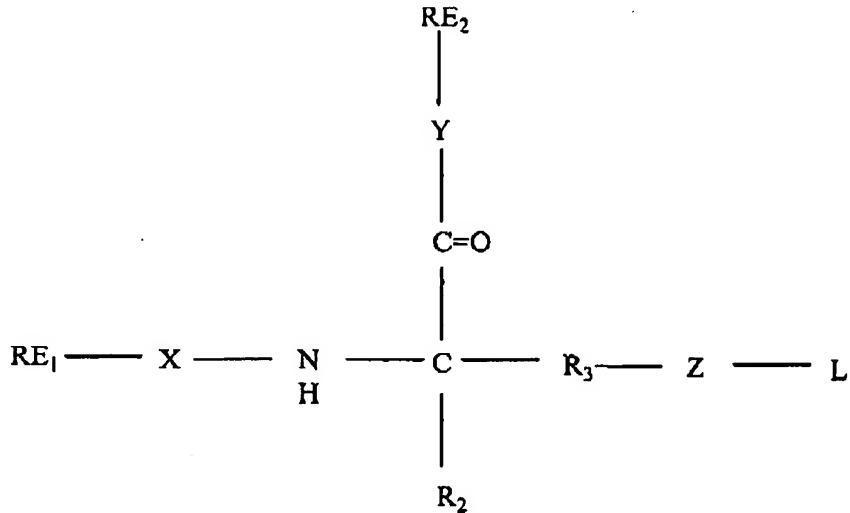
spots. Applicants respectfully submit that all of these asserted species can be readily searched and examined together as single group, and request search and examination of compositions comprising building blocks of any structure.

Building Blocks

In response to the species election requirement, Applicants select as the building block an amino acid or the corresponding derivatized amino acid. Formula A represents the amino acid:



Formula 2 represents the corresponding derivatized amino acid obtained from the general structure in Formula A above:



If the species requirement is deemed to require a more detailed structure of the derivatized amino acid, RE₁ is recognition element 1, RE₂ is recognition element 2, and L is a linker. X is absent, C=O, CH₂, NR, NR₂, NH, NHCONH, SCONH, CH=N, or OCH₂NH. Preferably X is absent or C=O. Y is absent, NH, O, CH₂, or NRCO. Preferably Y is NH or O. Preferably Y is NH. Z is CH₂, O, NH, S, CO, NR, NR₂, NHCONH, SCONH, CH=N, or OCH₂NH. Preferably Z is O. R₂ is H, CH₃, or another group that confers chirality on the building block and has size similar to or

smaller than a methyl group. R₃ is CH₂; CH₂-phenyl; CHCH₃; (CH₂)_n with n=2-3; or cyclic alkyl with 3-8 carbons, preferably 5-6 carbons, phenyl, naphthyl. Preferably R₃ is CH₂ or CH₂-phenyl.

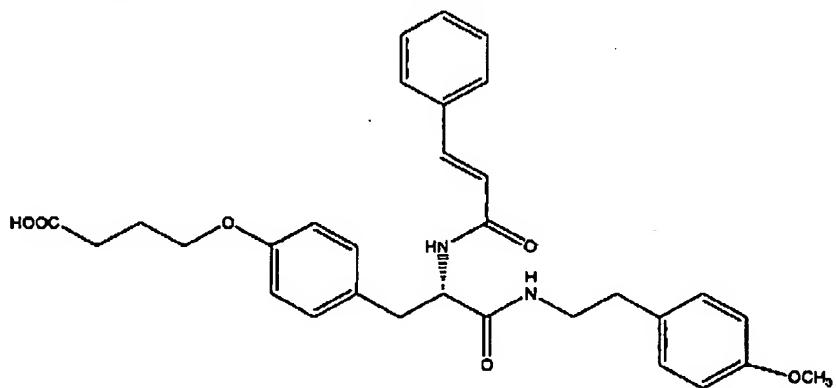
RE₁ is B1, B2, B3, B4, B5, B6, B7, B8, B9, A1, A2, A3, A4, A5, A6, A7, A8, or A9. Preferably RE₁ is B1, B2, B3, B4, B5, B6, B7, B8, or B9. RE₂ is A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, B2, B3, B4, B5, B6, B7, B8, or B9. Preferably RE₂ is A1, A2, A3, A4, A5, A6, A7, A8, or A9. In an embodiment, RE₁ can be B2, B4, or B6 and RE₂ can be A2, A4, or A6. In an embodiment, RE₁ can be B1, B3, B6, or B8 and RE₂ can be A2, A4, A5, or A9. In an embodiment, RE₁ can be B2, B4, B6, or B8 and RE₂ can be A2, A4, A6, or A8. In an embodiment, RE₁ can be B1, B2, B4, B6, or B8 and RE₂ can be A1, A2, A4, A6, or A8.

L is (CH₂)_nCOOH, with n=1-16, preferably n=2-8, preferably n=4-6, preferably n=3.

Applicants submit that pending claims 78-93 reads on or can include building blocks having the structure of the derivatized amino acid shown in Formula 2.

In the alternative, if the species election requirement is deemed to require a still more detailed structure of the building blocks, Applicants respectfully request search and examination of the species of building blocks having the general structure of a tyrosine and a derivatized tyrosine of formula TyrA_xB_y, in which x=1-9 and, independently, b=1-9. Applicants submit that pending claims 78-93 reads on or can include building blocks having the structure of TyrA_xB_y.

In the alternative, if the species election requirement is deemed to require a yet more detailed structure of the building block, Applicants respectfully request search and examination of the species of building blocks having the specific structure of a tyrosine and a derivatized tyrosine of formula TyrA₄B₄, shown below as structure 4-4 (i.e. 4-(4-({[2-(4-methoxy-phenyl)-ethylcarbamoyl]-(3-phenyl-acrylamino)-methyl]-amino}-phenoxy)-butyric acid).



Applicants submit that each of the pending claims 78–93 reads on or can include building blocks having the structure of TyrA₄B₄, a derivatized tyrosine.

If the species election requirement is maintained, Applicants elect the amino acid species recited with traverse, and note that the elected species is tyrosine. Applicants submit that each of the pending claims 78–93 can include tyrosine as the building block or framework unit of the building block. Applicants request search and examination of the same.

Supports

The Examiner requires restriction of the pending claims to a particular and specific support. Applicants have traversed the species election requirement as above, but if the requirement is maintained, Applicants submit that the support includes any functional group suitable for coupling to the building block, such that the functional group on the support and a functional group on the building block can form nucleophile-electrophile pairs, such as amine-carboxyl (or activated carboxyl), thiol-maleimide, alcohol-carboxyl (or activated carboxyl), mixtures thereof, and the like.

If the species election requirement is maintained, Applicants respectfully request search and examination of the species of support having amine functional groups, wherein the support is coupled to a building block with a carboxyl or activated carboxyl functional group, or vice-versa. Applicants submit that each of the pending claims 78–93 can include a support with amine functional groups. Applicants request search and examination of the same.

Type of Coupling

The Examiner requires restriction of the pending claims to a particular and specific type of coupling between the building block and the support, i.e. coupling by covalent bond, electrostatic interaction or a mixture thereof.

If the species election requirement is maintained, Applicants elect the covalent bond species, and submit that each of the pending claims 78–93 includes or reads on the elected species. Applicants request search and examination of the same.

SUMMARY

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date: 6 Nov '06


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